CLAIMS

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- 1. A method of enhancing the intrinsic activity of an enzyme in a raw enzyme solution, said method comprising treating said raw enzyme solution with an effective amount of a purifying agent for a sufficient period of time, at an effective raw enzyme weight to purifying agent weight ratio to effect said enhancement and provide an enzyme solution of enhanced activity.
- 2. A method as defined in claim 1 wherein said purifying agent is activated carbon.
- 3. A method as defined in claim 1 further comprising removing said purifying agent from said enzyme solution of enhanced activity to provide a purified enzyme solution.
- 4. A method as defined in claim 1 comprising passing said raw enzyme solution through a column containing an effective amount of said purifying agent.
- 5. A method as defined in claim 3 wherein said purifying agent is removed by a method selected from the group consisting of filtration and centrifugation.
- 6. A method as defined in claim 1 wherein said raw enzyme solution is diluted with water to provide a diluted raw enzyme solution.
- 7. A method as defined in claim 1 wherein said raw enzyme solution is diluted with an aqueous buffer solution to provide a buffered diluted raw enzyme solution.
- 8. A method as claimed in claim 1 wherein said effective raw enzyme to purifying agent ratio by weight is not greater than 50:1.
- 9. A method as claimed in claim 8 wherein said ratio is not greater than 15.
- 10. A method as defined in claim 1 wherein said enzyme is selected from the group consisting of amylase, glucoamylase, cellulase, xylanase, and all other group 3 hydrolases.
- 11. A method as defined in claim 1 wherein said enzyme solution of enhanced activity has a spectrum selected from Far UV (CD) and UV visible spectra distinct from said raw enzyme solution.
- 12. A method as defined in claim 11 wherein said enzyme solution of enhanced activity shows a relative absorbance intensity lower than said raw enzyme solution, in the CD spectral range of 205-230nm.
- 13. A method as defined in claim 11 wherein said enzyme is alpha-amylase and said enzyme solution of enhanced activity has a Far UV (CD) spectrum

- minimum ellipticity shifted by at least 1nm, from the raw enzyme solution, in the range between 205-230 nm.
- 14. A method as defined in claim 1 wherein said enzyme solution of enhanced activity has a UV-visible spectrum maximum peak at least 30 nm lower than said raw enzyme solution.
- 15. A method as defined in claim 1 wherein said enzyme is alpha-amylase and said enzyme solution of enhanced activity has a maximum spectral absorption peak over the range 340 to 360 nm.
- 16. A method as defined in claim 15 wherein said substrate is starch and said enzyme is alpha-amylase.
- 17. A method as defined in claim 1 wherein the enzyme solution of enhanced activity has a relatively less amount of organic entities having no enzymatic activity against starch, as determined by gel electrophoresis.
- 18. A method as defined in claim 12 wherein the ratio of A to B is at least 10 times greater than the ratio of A' to B', wherein A is the amount of enzyme in the enzyme solution of enhanced activity, B is the amount of said organic entities A' is the amount of enzyme in said raw enzyme solution and B' the amount of said organic entities in said raw enzyme solution.
- 19. An enzyme solution of enhanced activity when made by a method as defined in claim 1.
- 20. A method of treating a substrate susceptible to enzymatic reaction with an enzyme, said method comprising treating said substrate with an enzyme formulation of enhanced activity as defined in claim 19.

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